

July 2015

Lincoln County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 9 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Lincoln County economy.¹ These 9 sectors have a total direct output of approximately \$90 million and support 425.8 jobs in Lincoln County. Running the model for all 9 sectors simultaneously produces the following results:

Agriculture Contribution in Lincoln County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	425.8	21%	\$29,674,699	26%	\$90,013,177	79%
Indirect Effect	175.3	8%	\$11,420,938	10%	\$22,952,711	20%
Induced Effect	47.4	2%	\$2,961,746	3%	\$5,292,274	5%
Total Effect	648.5	31%	\$44,057,383	39%	\$118,258,161	104%

As shown in the above table, agriculture, food, and food processing supports 648.5 jobs, or 31% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$118 million, roughly 104% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 9 agriculture, food, and food processing sectors is approximately \$44 million, or 39% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 39% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 184.3 employees. This table also shows the amount of jobs that are created by the agriculture industry in Lincoln County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	184.3	\$38,522,525
Grain farming	120.4	\$33,994,517
All other crop farming.....	102.6	\$10,500,867
Animal production, except cattle and poultry and eggs.....	48.1	\$3,927,117
Support activities for agriculture and forestry	42.3	\$2,323,485
Wholesale trade.....	31.0	\$5,703,624
Dairy cattle and milk production.....	20.2	\$3,030,365
Monetary authorities and depository credit intermediation	11.3	\$1,687,674
Full-service restaurants.....	6.8	\$232,622
Oilseed farming.....	5.5	\$9,552,646

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately \$39 million to Lincoln County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	184.3	\$38,522,525
Grain farming	120.4	\$33,994,517
All other crop farming.....	102.6	\$10,500,867
Oilseed farming	5.5	\$9,552,646
Wholesale trade.....	31.0	\$5,703,624
Animal production, except cattle and poultry and eggs.....	48.1	\$3,927,117
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Support activities for agriculture and forestry	42.3	\$2,323,485
Monetary authorities and depository credit intermediation	11.3	\$1,687,674
Owner-occupied dwellings	0.0	\$1,551,052

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Lincoln County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.